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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,719	03/21/2006	Ronald Vermeer	2903925-265000	4678

84331 7590 10/15/2010  
Baker Donelson Bearman, Caldwell & Berkowitz, PC  
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Suite 900  
Washington, DC 20001

EXAMINER
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FISHER, ABIGAIL L

ART UNIT	PAPER NUMBER
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1616

NOTIFICATION DATE	DELIVERY MODE
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10/15/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/572,719	<b>Applicant(s)</b> VERMEER, RONALD	
	<b>Examiner</b> ABIGAIL FISHER	<b>Art Unit</b> 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11, 14-17 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11, 14-17 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Due to the discussion at a Pre-Appeal conference, prosecution is reopened. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

### ***Status of the Claims***

Claims 1-10, 12-13, 18-21 and 23-24 were/stand cancelled. Claims 11, 14-17 and 22 are pending.

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Applicant Claims
2. Determining the scope and contents of the prior art.
3. Ascertaining the differences between the prior art and the claims at issue, and resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 11, 14-15, 17 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strom et al. (US PG PUB No. 20010051175, cited in the Office action mailed on 10/01/09) in view of Grayson et al. (Pestic. Sci. 1995) and Aven (EP 1023832, cited in the Office action mailed on 10/1/09).**

### **Applicant Claims**

The instant application claims a suspension concentrate consisting of between 10 and 40% by weight, based on the suspension concentrate, of at least one active compound that is solid at room temperature selected from the group consisting of azaconazole, bitertanol, bromuconazole, cyproconazole, diclobutrazole, difenoconazole, diniconazole, epoxiconazole, etaconazole, fenbuconazole, fluquinconazole, flusilazole, flutriafol, imibenconazole, ipconazole, myclobutanil, paclebutrazol, penconazole, propiconazole, prothioconazole, simeconazole, tebuconazole, tetraconazole, triadimefon, triadimenol, triticonazole, dimoxystrobin, fluoxastrobin, kresoxim-methyl, metaminostrobin, picoxystrobin, pyraclostrobin, and trifloxystrobin; between 5 and 20% by weight, based on the suspension concentrate, of at least one alkanolethoxylate of formula I; and between 3 and 8% by weight, based on the suspension concentrate of at least one dispersant mixture; between 40 and 65% by weight, based on the suspension concentrate of water; and between 0 and 15% by weight, based on the suspension concentrate of one or more additives. The dispersants are selected from the group

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consisting of the polymers of methyl 2-methyl-2-propenoate and  $\alpha$ -(2-methyl-1-oxo-2-propenyl)-  $\omega$ -methoxy-poly(oxy-1,2-ethanediyl), tristyrylphenoethoxylates, and propylene oxide/ethylene oxide block copolymers having molecular weights between 8000 and 10,000.

**Determination of the Scope and Content of the Prior Art  
(MPEP §2141.01)**

Strom et al. is directed to aqueous dispersions of agricultural chemicals. Example of active agents that can be utilized include insecticides such as triazoles (paragraph 0012) and fungicides such as azoles such as hexaconazole and strobilurins such as azoxystrobin (paragraph 00130. The surface active agent included may be anionic, cationic or nonionic, or combinations of cationic and nonionic or anionic and nonionic. A stabilizing amount of the surfactant is used, preferably not less than about 1% and not more than 30% by weight based on the total weight of the water, pesticide and surfactant (paragraph 0014). Specific examples of commercially available surface active agents include Atlox 4991 and 4913 surfactants (nonionic), Pluronic P104 (nonionic), and Soprophor FL surfactant (anionic). The pesticide is in an amount from about 1 to about 60% (claim 1). Exemplified pesticides include epoxiconazole (example 7).

**Ascertainment of the Difference Between Scope the Prior Art and the Claims  
(MPEP §2141.012)**

While Strom et al. teach surfactant combinations of an anionic and nonionic surfactant, Strom et al. do not exemplify utilizing Atlox 4913 in combination with Soprophor FL.

Strom et al. do not teach the incorporation of an alkanolethoxylate. However, this deficiency is cured by Grayson et al.

Grayson et al. is directed to the effect of adjuvants on the performance of the fungicide metconazole. It is taught that suspension concentrates which are generally less active saw around a 35-fold enhancement with the addition of Genapol C12/C14 alcohol ethoxylates (abstract). Table 2 shows the efficacy of the addition of the Genapol adjuvants to suspension concentrates. Genapol adjuvants utilized are C050, C080, C100 and C200. Adjuvants were utilized in 10% (page 155, section 2.3). It is taught that Genapol adjuvants possess the capability of drastically improving the performance of particulate formulations of agrochemicals so that their activities exceed those of solution formulations without adjuvants and approach the activities of solution formulations with adjuvants (page 158, section 3, right column, first paragraph).

While Strom et al. teach that triazoles can be incorporated, Strom et al. do not teach the incorporation of tebuconazole or tebuconazole and trifloxystrobin. However, this deficiency is cured by Aven.

Aven is directed to aqueous suspension concentrates. The compositions comprise 50 to 400 g/L of a crop protection compound, 50 to 500 g/L of an adjuvant and at least one surfactant selected from the group consisting of (c1) 5 to 75 g/L of one or more non-ionic dispersant and (c2) 10 to 100 g/L of one or more anionic dispersants (abstract). Fungicides taught include bitertanol, bromuconazole, cyproconazole, diclobutazole, difenoconazole, diniconazole, epoxiconazole, etaconazole, fenbuconazole, fluquinconazole, flusilazole, flutriafol, metconazole, ipconazole,

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myclobutanil, penconazole, propiconazole, hexaconazole, tebuconazole, tetraconazole, triadimefon, tridimenol, triticonazole, kresoxim-methyl and trifloxystrobin (paragraph 0017). Surfactants/dispersants taught include non-ionic dispersants such as polyethyleneoxide-polypropyleneoxide block copolymers (paragraph 0042). The most preferred are the Pluronic type block copolymers such as Pluronic PE 10500 (paragraph 0043). Anionic dispersants taught include Soprophor FL (table page 10). Both Pluronic PE 10500 and Soprophor FL are exemplified.

***Finding of Prima Facie Obviousness Rationale and Motivation  
(MPEP §2142-2143)***

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Strom et al., Aven and Grayson et al. and utilize an ethoxylate alcohol as a surfactant adjuvant in order to enhance foliar uptake. One of ordinary skill in the art would have been motivated to add an ethoxylated alcohol as Grayson et al. teach that these adjuvants when added to suspension concentrates drastically enhance their performance. Therefore, one of ordinary skill in the art would have been motivated to add ethoxylate alcohols such as the Genapol adjuvants to the formulation of Strom et al. to enhance absorbance of the pesticides based on the teachings of Grayson et al. There is a reasonable expectation that the effect seen with metconazole as taught by Grayson et al. would reasonably apply to other azoles such as tebuconazole. One of ordinary skill in the art would have a reasonable expectation of success as both metconazole and tebuconazole are azole fungicides (both species of the same genus) and therefore would functionally be expected to behave similarly.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Strom et al., Aven and Grayson et al. and utilize an anionic and nonionic surfactant in combination together such as Atlox 4913 and Soprophor FL. One of ordinary skill in the art would have been motivated to utilize a combination of an anionic and nonionic surfactant as this is one specific combination taught as being suitable. Atlox 4913 is a specifically taught commercially available nonionic surfactant and Soprophor FL is a specifically taught commercially available anionic surfactant. Therefore, it would have been obvious to one of ordinary skill in the art to utilize these specifically taught surfactants in a specifically taught surfactant combination.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Strom et al., Aven and Grayson et al. and utilize tebuconazole and trifloxystrobin in the invention of Strom et al. One of ordinary skill in the art would have been motivated to add these active compounds as Strom et al. teach that triazoles can be included and the taught triazoles (epoxiconazole and hexaconazole) have the same function (i.e. fungicide) as tebuconazole and trifloxystrobin as taught by Aven. As a general principle it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose, the idea of combining them flows logically from their having been individually taught in the prior art. See *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) **MPEP 2144.06**.



Regarding the claimed amount of active compound, water and dispersant mixture, Strom et al. teach an amount that overlaps that instantly claimed. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. **See MPEP 2144.05 [R-5].**

Regarding the claimed amount of the alcohol ethoxylate, Grayson et al. exemplify utilizing 10%. The amount of an ethoxylate in a composition is clearly a result effective parameter that a person of ordinary skill in the art would routinely optimize. Optimization of parameters is a routine practice that would be obvious for a person of ordinary skill in the art to employ and reasonably would expect success. It would have been customary for an artisan of ordinary skill to determine the optimal amount of ethoxylate to add in order to best achieve the desired absorbance. It would have been obvious to one of ordinary skill in the art at the time of the invention to engage in routine experimentation to determine optimal or workable ranges that produce expected results. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F. 2d 454, 105 USPQ 233 (CCPA 1955).

Regarding the claimed length of the alkanolethoxylate, Grayson et al. teach an amount that overlaps that instantly claimed with specific examples falling within the instant claimed range. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. **See MPEP 2144.05 [R-5].**

Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

**Claims 11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strom et al. in view of Grayson et al. and in further view of Mauler-Machnik et al. (US Patent No. 6559136, cited in the Office action mailed on 10/01/09) and Heinemann et al. (WO 9727189, cited in the Office action mailed on 10/01/09).**

#### **Applicant Claims**

The instant application claims the active compounds are prothioconazole and fluoxastrobin.

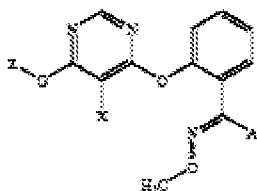
#### **Determination of the Scope and Content of the Prior Art (MPEP §2141.01)**

The teachings of Strom et al. and Stock et al. are set forth above. Strom et al. is directed to aqueous dispersion comprising active compounds which include triazoles such as epoxiconazole and hexaconazole. The active ingredients are combined with surfactant combinations and water to form pesticidal compositions. Grayson et al. teach that the addition of adjuvants such as ethoxylated alcohols (Genapol) enhance absorption of metconazole.

#### **Ascertainment of the Difference Between Scope the Prior Art and the Claims (MPEP §2141.012)**

Strom et al. do not specify that the fungicides are fluoxastrobin and prothioconazole can be added. However, this deficiency is cured by Heinemann et al. and Mauler-Machnik et al.

Mauler-Machnik et al. found that utilizing fungicide compounds of general formula I in combination with other fungicides such as tebuconazole (3), epoxiconazole (10), metconazole (11), 2-(1-chloro-cyclopropyl)-1-(2-chlorophenyl)-3(5-mercapto-1,2,4-triazol-1-yl)-propan-2-ol (aka prothioconazole) (69) and trifloxystrobin (75) found in columns 1 and 2 and claim 1 have very good fungicidal properties (column 2, lines 60-62). Compounds of Formula I have the following structure:



in which

Z represents optionally substituted phenyl,

X represents halogen and

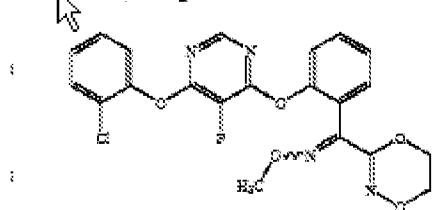
A represents heterocyclyl —COOCH<sub>3</sub> or —CO—NH—  
CH<sub>3</sub> and

It is taught that the compounds of the formula I are known for example in WO 9727189 (column 3, lines 34-35).

Heinemann et al. (wherein US Patent No. 6103717 is serving as the English Language Equivalent) teach the compounds of formula 1 from Mauler-Machnik et al. One specific compound claimed is:

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8. The compound of the formula (I) according to claim 1, which is 3-{1-[2-(4-chlorophenoxy)-5-fluoropyrimidin-5-yl]-phenyl}-1-(methoxymethyl)-5,6-dihydro-1,4,2-dioxazine, having the formula:



This compound is fluoxastrobin.

### ***Finding of Prima Facie Obviousness Rationale and Motivation (MPEP §2142-2143)***

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Strom et al., Grayson et al., Mauler-Machnik et al. and Heinemann et al. and utilize fluoxastrobin and prothioconazole in the invention of Strom et al. One of ordinary skill in the art would have been motivated to utilize fluoxastrobin and prothioconazole as Mauler-Machnik et al. teach utilizing generic compounds which encompass fluoxastrobin in combination with epoxiconazole and prothioconazole. Since Mauler-Machnik et al. teach compounds of their formula I can be found in Heinemann et al., one of ordinary skill in the art would look to this patent for specific compounds of formula I. One specific compound taught and claimed is fluoxastrobin. Therefore, Mauler-Machnik et al. teach utilizing fluoxastrobin in combination with epoxiconazole and prothioconazole and their combination would have been obvious to one of ordinary skill in the art. As a general principle it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very

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same purpose, the idea of combining them flows logically from their having been individually taught in the prior art. See *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) **MPEP 2144.06**.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to combine the teachings of Strom et al., Grayson et al., Mauler-Machnik et al. and Heinemann et al. and utilize an ethoxylate alcohol as a surfactant adjuvant in order to enhance foliar uptake. One of ordinary skill in the art would have been motivated to add an ethoxylated alcohol as Grayson et al. teach that these adjuvants when added to suspension concentrates drastically enhance their performance. Therefore, one of ordinary skill in the art would have been motivated to add ethoxylate alcohols such as the Genapol adjuvants to the formulation of Strom et al. to enhance absorbance of the pesticides based on the teachings of Grayson et al. There is a reasonable expectation that the effect seen with metconazole as taught by Grayson et al. would reasonably apply to other azoles such as tebuconazole. One of ordinary skill in the art would have a reasonable expectation success as both metconazole and tebuconazole are azole fungicides (both species of the same genus) and therefore would functionally be expected to behave similarly.

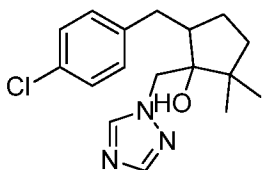
Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

### ***Response to Arguments***

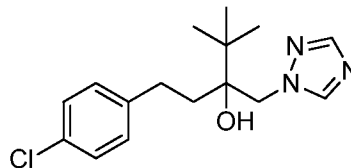
Applicant's arguments with respect to claims 11, 14-17 and 22 have been considered but are moot in view of the new ground(s) of rejection. However, the examiner would like to address a couple of the arguments as they pertain to the newly cited art. Previously, applicant argued that Stock is not properly combinable with Strom because Stock is not related to a suspension concentrate. During a pre-appeal conference this argument was found persuasive. Newly cited Grayson et al. teaches the use of the instantly claimed ethoxylates in a suspension concentrate with a specific azole. While this azole is not currently claimed as an active compound, the examiner (as argued above) argues that one of ordinary skill in the art would reasonably expect that the use of ethoxylates with other azoles such as tebuconazole or prothioconazole would also benefit from the inclusion of the ethoxylate adjuvant. As can be seen from the following drawings, metconazole, tebuconazole and prothioconazole all possess the same core and therefore would be expected to be effected similarly by the inclusion of the Genapol ethoxylates.

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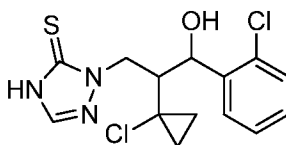
5-(4-chlorobenzyl)-2,2-dimethyl-1-(1H-1,2,4-triazol-1-ylmethyl)cyclopentanol  
(metconazole)



1-(4-Chlorophenyl)-4,4-dimethyl-3-(1,2,4-triazol-1-ylmethyl)pentan-3-ol (tebuconazole)



2-[2-(1-chlorocyclopropyl)-3-(2-chlorophenyl)-3-hydroxypropyl]-2,4-dihydro-1,2,4-triazole-3-thione  
(prothioconazole)



Therefore, a *prima facie* case of obviousness has been established. In order to overcome the rejection, applicant would have to demonstrate why one of ordinary skill in the art would not expect the Genapol ethoxylates to behave similarly with other azoles of the genus or the other specifically claimed azoles. .

### Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ABIGAIL FISHER whose telephone number is (571)270-3502. The examiner can normally be reached on M-Th 9am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Abigail Fisher  
Examiner  
Art Unit 1616

AF  
/Abigail Fisher/

Examiner, Art Unit 1616